General

Guideline Title

Colonoscopy surveillance after colorectal cancer resection: recommendations of the U.S. Multi-Society Task Force on Colorectal Cancer.

Bibliographic Source(s)

Kahi CJ, Boland CR, Dominitz JA, Giardiello FM, Johnson DA, Kaltenbach T, Lieberman D, Levin TR, Robertson DJ, Rex DK. Colonoscopy surveillance after colorectal cancer resection: recommendations of the U.S. Multi-Society Task Force on Colorectal Cancer. Gastrointest Endosc. 2016 Mar;83(3):489-98. [119 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions for the quality of evidence (high, moderate, low, very low) and the strength of the recommendations (strong or weak) are provided at the end of the "Major Recommendations" field.

Colonoscopy and Perioperative Clearing in Patients with Cancer of the Colon or Rectum

The Task Force recommends that patients with colorectal cancer (CRC) undergo high-quality perioperative clearing with colonoscopy. The procedure should be performed preoperatively, or within a 3- to 6-month interval after surgery in the case of obstructive CRC. The goals of perioperative clearing colonoscopy are detection of synchronous cancer and detection and complete resection of precancerous polyps. (*Strong recommendation, low-quality evidence*)

Colonoscopy and Prevention of Metachronous Cancer after Surgery for Colon and for Rectal Cancer

The Task Force recommends that patients who have undergone curative resection of either colon or rectal cancer receive their first surveillance colonoscopy 1 year after surgery (or 1 year after the clearing perioperative colonoscopy). Additional surveillance recommendations apply to patients with rectal cancer (see "Additional Considerations in Surveillance of Rectal Cancer" below). (*Strong recommendation, low-quality evidence*)

The Task Force recommends that, after the 1-year colonoscopy, the interval to the next colonoscopy should be 3 years (i.e., 4 years after surgery or perioperative colonoscopy) and then 5 years (i.e., 9 years after surgery or perioperative colonoscopy). Subsequent colonoscopies should occur at 5-year intervals until the benefit of continued surveillance is outweighed by diminishing life expectancy. If neoplastic polyps are detected, the

intervals between colonoscopies should be in accordance with published guidelines for polyp surveillance intervals. These intervals do not apply to patients with Lynch syndrome. (*Strong recommendation, low-quality evidence*)

Additional Considerations in Surveillance of Rectal Cancer

Patients with localized rectal cancer who have undergone surgery without total mesorectal excision, those who have undergone transanal local excision (i.e., transanal excision or transanal endoscopic microsurgery) or endoscopic submucosal dissection, and those with locally advanced rectal cancer who did not receive neoadjuvant chemoradiation and then surgery using total mesorectal excision techniques are at increased risk for local recurrence. In these situations, the Task Force suggests local surveillance with flexible sigmoidoscopy or endoscopic ultrasound (EUS) every 3 to 6 months for the first 2 to 3 years after surgery. These surveillance measures are in addition to recommended colonoscopic surveillance for metachronous neoplasia. (*Weak recommendation, low-quality evidence*)

Alternatives and Adjuncts to Colonoscopy

Computed Tomographic Colonography (CTC)

In patients with obstructive CRC precluding complete colonoscopy, the Task Force recommends CTC as the best alternative to exclude synchronous neoplasms. Double-contrast barium enema is an acceptable alternative if CTC is not available. (*Strong recommendation, moderate-quality evidence*)

Fecal Tests

There is insufficient evidence to recommend routine use of fecal immunochemical tests (FIT) or fecal deoxyribonucleic acid (DNA) for surveillance after CRC resection.

Definitions

Grading of Recommendations Assessment, Development and Evaluation (GRADE) Ratings of Evidence

Rating of Evidence	Definitions
A: High quality	Further research is very unlikely to change confidence in the estimate of effect
B: Moderate quality	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate
C: Low quality	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate
D: Very low quality	Any estimate of effect is very uncertain

Strength of the Recommendations

Strong recommendations mean that most informed patients would choose the recommended management and that clinicians can structure their interactions with patients accordingly.

Weak recommendations mean that patients' choices will vary according to their values and preferences, and clinicians must ensure that patients' care is in keeping with their values and preferences.

Weaker recommendations are indicated by phrases such as "the Task Force suggests," whereas stronger recommendations are stated as "the Task Force recommends."

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Colorectal cancer (CRC)

Guideline Category

Evaluation

Prevention

Screening

Clinical Specialty

Colon and Rectal Surgery

Gastroenterology

Oncology

Preventive Medicine

Intended Users

Advanced Practice Nurses

Health Care Providers

Health Plans

Hospitals

Managed Care Organizations

Physician Assistants

Physicians

Utilization Management

Guideline Objective(s)

To provide a critical review of the literature and recommendations regarding the role of colonoscopy, flexible sigmoidoscopy, endoscopic ultrasound (EUS), fecal testing, and computed tomographic colonography (CTC) in surveillance after surgical resection of CRC

Target Population

Patients who have undergone surgical resection for TNM stages I–III (or Dukes A–C) colorectal cancer (CRC) and selected patients who have undergone surgical resection for stage IV cancer

Interventions and Practices Considered

1. Perioperative clearing colonoscopy
2. Frequency of surveillance colonoscopy after curative resection
3. Additional local surveillance with flexible sigmoidoscopy or endoscopic ultrasound (EUS) in select patients with rectal cancer

4. Alternatives and adjuncts to colonoscopy
    - Computed tomographic colonography (CTC)
    - Double-contrast barium enema
    - Fecal immunochemical tests (FIT) or fecal deoxyribonucleic acid (DNA) (insufficient evidence to recommend routinely)

Major Outcomes Considered

- Overall and cancer-specific mortality
- Rates of second primary (metachronous) cancers and anastomotic recurrences
- Sensitivity, specificity, and negative predictive value of alternatives and adjuncts to colonoscopy

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The English-language medical literature was searched using MEDLINE (2005 to September 30, 2015), EMBASE (2005 to September 30, 2015), the Database of Abstracts of Reviews and Effects (2005 to October 7, 2015), and the Cochrane Database of Systematic Reviews (2005 to October 7, 2015). In MEDLINE, subject headings for colorectal neoplasms were combined with the subheading for surgery, resection, postoperative, colectomy, curative, survivor, survival, neoplasm recurrence, second primary neoplasms, and treatment outcome. The resulting set was combined with subject and keywords for colonoscopy or follow-up studies. Similar searches were performed in EMBASE, the Database of Abstracts of Reviews and Effects, and the Cochrane Database of Systematic Reviews. Case reports and studies performed in patients with inflammatory bowel disease, prior colorectal cancer (CRC), or hereditary CRC syndromes were excluded. Review papers, meta-analyses, gastroenterology textbooks, and editorials were searched manually for additional references. Data from studies with no explicit documentation that perioperative colonoscopic clearing had been performed were not included in the overall summary tables, but some of these studies are referred to in the discussion of the evidence. The review includes studies published since 2005, but also incorporates older evidence used to draft the 2006 guidelines.

Number of Source Documents

The number of citations initially identified was 1848. The Task Force included 99 studies as evidence.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Grading of Recommendations Assessment, Development and Evaluation (GRADE) Ratings of Evidence

Rating of Evidence	Definitions
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B: Moderate	Further research is likely to have an important impact on confidence in the estimate of effect and may change the

Rating of Evidence	Definitions
quality	estimate
C: Low quality	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate
D: Very low quality	Any estimate of effect is very uncertain

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

The U.S. Multi-Society Task Force (USMSTF) grades the quality of evidence and strength of recommendations using an adaptation of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach. The GRADE process categorizes the quality of the evidence as high, moderate, low, or very low (see the "Rating Scheme for the Strength of the Evidence" field). This categorization is based on an assessment of the study design (e.g., randomized controlled trial or observational study), study limitations, inconsistency of results, indirectness of evidence, imprecision, and publication bias. The USMSTF members conduct literature searches to identify published papers that address the key issues discussed within these recommendations. These publications are supplemented both by review of citations from the identified papers as well as other key references elicited from the subject matter experts on the Task Force. The GRADE process involves the collection of literature, analysis, summary (often as meta-analysis), and a separate review of the quality of evidence and strength of recommendations. The USMSTF members employ a modified, qualitative approach for this assessment based on exhaustive and critical review of evidence, without a traditional meta-analysis. The GRADE process separates evaluation of the quality of the evidence to support a recommendation from the strength of that recommendation. This is done in recognition of the fact that, although the quality of the evidence impacts the strength of the recommendation, other factors can influence a recommendation, such as side effects, patient preferences, values, and cost.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Process

The U.S. Multi-Society Task Force (USMSTF) includes gastroenterology experts with specific interest in colorectal cancer. These members represent the American College of Gastroenterology, the American Gastroenterological Association, and the American Society for Gastrointestinal Endoscopy. Summary tables and a draft document were circulated to members of the Task Force, and final guidelines were developed by consensus during a joint teleconference.

Rating Scheme for the Strength of the Recommendations

Strong recommendations mean that most informed patients would choose the recommended management and that clinicians can structure their interactions with patients accordingly.

Weak recommendations mean that patients' choices will vary according to their values and preferences, and clinicians must ensure that patients' care is in keeping with their values and preferences.

Weaker recommendations are indicated by phrases such as "the Task Force suggests," whereas stronger recommendations are stated as "the Task Force recommends."

Cost Analysis

Studies published since 2005 show that the 1-year examination is high-yield and cost effective.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

The document underwent committee review and governing board approval by the American College of Gastroenterology, the American Gastroenterological Association, and the American Society for Gastrointestinal Endoscopy.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

The postoperative surveillance of patients treated for colorectal cancer (CRC) is intended to prolong survival by diagnosing recurrent and metachronous cancers at a curable stage, and to prevent metachronous cancer by detection and removal of precancerous polyps. Refer to the "Results of Literature Review" section of the original guideline document for discussions of evidence supporting the benefits of specific recommendations.

Potential Harms

- Complications of colonoscopic surveillance, including hemorrhage and perforation
- The use of computed tomographic colonography (CTC) with intravenous contrast can be considered preoperatively to exclude both synchronous neoplasia and distant metastases, although caution is advised in cases with complete colonic obstruction due to increased perforation risk associated with gas insufflation.

Qualifying Statements

Qualifying Statements

The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or the Department of Veterans Affairs.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2016 Mar

Guideline Developer(s)

U.S. Multi-Society Task Force on Colorectal Cancer - Clinical Specialty Collaboration

Source(s) of Funding

The U.S. Multi-Society Task Force on Colorectal Cancer is a volunteer effort and therefore has no funding.

Guideline Committee

U.S. Multi-Society Task Force on Colorectal Cancer

Composition of Group That Authored the Guideline

Task Force Members: Charles J. Kahi, C. Richard Boland, Jason A. Dominitz, Francis M. Giardiello, David A. Johnson, Tonya Kaltenbach, David Lieberman, Theodore R. Levin, Douglas J. Robertson, Douglas K. Rex

Financial Disclosures/Conflicts of Interest

All authors disclosed no financial relationships relevant to this publication.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the American Society for Gastrointestinal Endoscopy Web site .

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on September 1, 2016. The information was verified by the guideline developer on September 12, 2016.

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